

Description

Money-operated machine and method for servicing it

The invention relates to a money-operated machine according to the preamble of patent claim 1 and to a method for servicing such a machine.

Money-operated machines of this type are used as parking-ticket machines but also as cigarette machines, stamp machines, ticket machines, snack machines and comparable machines with low power consumption.

German product specification "SITRAFFIC SITY 5", published by Siemens AG under order number E10003-A800-W19, discloses a parking-ticket machine from which parking tickets can be obtained using coins, as well as other payment means, with the coins being held in a coin box. This coin box is in the form of a replaceable cashbox which - before it can no longer hold any more money - regularly needs to be exchanged for an empty cashbox. Different versions are provided in order to supply power to electrical loads of the parking-ticket machine, for example controllers with microprocessors and data storage means, paper-printing and cutting apparatuses, coin-slot barrier and checking means, LCD displays and operator control elements. In addition to a solar version with a solar module and storage battery (called battery for short in the text which follows) and a lamp version in which the machine is connected to the power supply means of a nearby street lamp, a purely battery-operated version is known, in which empty batteries have to be exchanged for full batteries at specific intervals.

European patent application EP 0 692 599 A1 discloses a system for securely transporting articles. The system has a storage station in an office and a deposit station in a bank, which

stations both have a modem for communicating with one another. The modems are connected to computers and these are in turn connected to docking stations which can receive an "intelligent" security container. The upper face of a docking station forms a bearing surface for a cartridge from which bank notes or checks can be drawn into the docking station. The electrical circuit of a docking station comprises a power supply unit which is connected to an AC voltage source or an internal battery during operation and supplies power to the electronic circuits. Said power supply unit is also connected to a battery-charging connection for charging an internal battery of the security container.

However, this known machine requires a considerable amount of servicing outlay for technical maintenance, replacing paper and the cashbox, and changing the battery.

The invention is therefore based on the object of providing a money-operated machine of the type mentioned in the introduction which requires less servicing, and a method for servicing a machine of this type.

According to the invention, the first part of the object is achieved by a money-operated machine of the type mentioned in the introduction which has the features specified in the characterizing part of patent claim 1. Since the voltage source is integrated in the cashbox in such a way that they form a common replacement unit, the voltage source is automatically replaced each time the cashbox is replaced, so that the machine is always guaranteed to be supplied with power. The new cashbox has a charged voltage source, so that it is not necessary to replace rechargeable voltage sources, for example battery devices, in a separate operation. This provides a cost-effective solution for supplying power to a money-operated machine along with correspondingly low outlay on servicing. According to the invention, the replacement unit has an interface via which the voltage source can be connected to electrical loads when the replacement unit is positioned in the machine. The interface has, for example, contacts, preferably plug contacts, via which the voltage source can be electrically connected to the power consumers in the machine when the replacement unit is positioned in said machine. Contact can therefore be interrupted or made between electrical loads and the voltage source which is integrated in the replacement unit by simply removing or inserting the replacement unit.

In one preferred embodiment of the invention, the interface is designed in such a way that the voltage source can be connected to a charging station via said interface when the replacement unit is positioned in a holding frame which is arranged outside the machine. Therefore, when the replacement unit

PCT/EP2004/053092
2003P17672WOUS

- 3a -

for example on the housing of the machine, which are present on
the machine in any

AMENDED SHEET

case and provided to display other information. Maintenance personnel use these display means, which may be formed by light-emitting diodes or liquid-crystal displays, to establish whether a replacement unit which is located in a storage frame has a charged voltage source or a voltage source which is still being charged. As a result, a replacement unit with a fully charged voltage source can be reinserted into a machine, while other replacement units remain in the storage frame until they reach the full charge state.

The other part of the object on which the invention is based is achieved by a method for servicing a money-operated machine as claimed in one of claims 1 to 5 by means of the features described in patent claim 6. This servicing method, in particular for replacing the cashbox and for charging the voltage source, proposes exchanging, at prespecified intervals, a replacement unit of the machine, which unit is to be exchanged and has a cashbox which needs to be emptied and/or a voltage source which needs to be charged, for a new replacement unit which has an empty cashbox and a charged voltage source. In this case, a new replacement unit is prepared in a holding frame with a charging station in which the voltage source is charged, with the holding frame being arranged in a transportation vehicle and/or at a cashbox-emptying location and/or at a special charging location. This renders separate servicing runs for replacing the cashbox and exchanging the voltage source superfluous since these can both be performed in a single operation.

Further advantages of the invention can be found in the following explanation of the drawing whose single figure schematically illustrates an inventive money-operated machine and a method for servicing it.

PCT/EP2004/053092
2003P17672WOUS

- 4a -

The figure shows a money-operated machine 1, for example a parking-ticket machine, which has a cashbox 2 for